

Work Order ID 150883

September 08, 2016 3:34:59 PM

150883

Page 1

Item ID: 647.3903 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Deflector Assembly
Start Date: 9/8/2016 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 9/30/2016 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: SHA Date: SEP 08 2016 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.3900	C1

110	Pick Kit	0.00
-----	----------	------

110

Packaging	Memo	0.01
-----------	------	------

Packaging

120		0.00
-----	--	------

120

Small Fab	Memo	0.17
-----------	------	------

Small Fab Assemble as per dwg and apply loctite 598 on all faying surfaces per note .

A/R RTV LOCTITE 598: 135479
exp. date: 04/18

130	QC5- Inspect part completeness to step on W/O	0.00
-----	---	------

130

QC	Memo	0.01
----	------	------

Quality Control

4X 16/10/03 **DAS 36 9-89**

4 **DAS 38 9-89**

OCT 05 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

Work Order ID 150883

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150883

Page 2

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location: <i>ST 024</i>	0.00						<i>YK</i>	
140								<i>DAS</i>	<i>OCT 04 2016</i>
Packaging	Memo	0.01						<i>26</i>	
Packaging	***IDENTIFY AS PER IAW MPP-120***							<i>9-89</i>	
150	QC21- Final Inspection - Work Order Release	0.00				<i>DAS</i>			
150						<i>21</i>			<i>OCT 05 2016</i>
QC	Memo	0.07				<i>9-89</i>			
Quality Control									

DAS
21
9-89 *OCT 05 2016*

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Picklist Print

September 08, 2016 3:34:57 PM

Page 1

Work Order ID: 150883

150883

Parent Item: 647.3903

647 3903

Parent Item Name: Deflector Assembly

Start Date: 9/8/2016

Required Date: 9/30/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 14.07.21 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.3915 *647 3915* Deflector		Manufactured	No				Each	9.0000	**	4			DAS 6 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				cck053		9							
				131243		9							
647.3916 *647 3916* Deflector		Manufactured	No				Each	7.0000	**	4			DAS 6 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				cck023		7							
				147739		7							
647.3917 *647 3917* Doubler		Manufactured	No				Each	15.0000	**	8			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				cck111		15							
				138766		15							
CR3213-6-9 *CR3213-6-9* Cherry Rivet		Purchased	No				Each	108.0000	**	24			DAS 6 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST319		108							
				m133791		8							
				m135015		100							

SEP 27 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____									

DART AEROSPACE APICAL INDUSTRIES, INC. dba DART AEROSPACE	ENGINEERING CHANGE NOTICE NO. 04948				SHEET 1 OF 2	
	DWG NO. 647.3900		REV: C	PREPARED BY: M. ANDECK	DATE: 05/04/15	EFFECT ON DWG ☐ INC. ☒ UNINC.
	DWG TITLE: DEFLECTORS					
	APPROVED BY:	ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER	
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED TOLERANCE AND NOTES				ECR: D-15-01

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.
- 10 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.

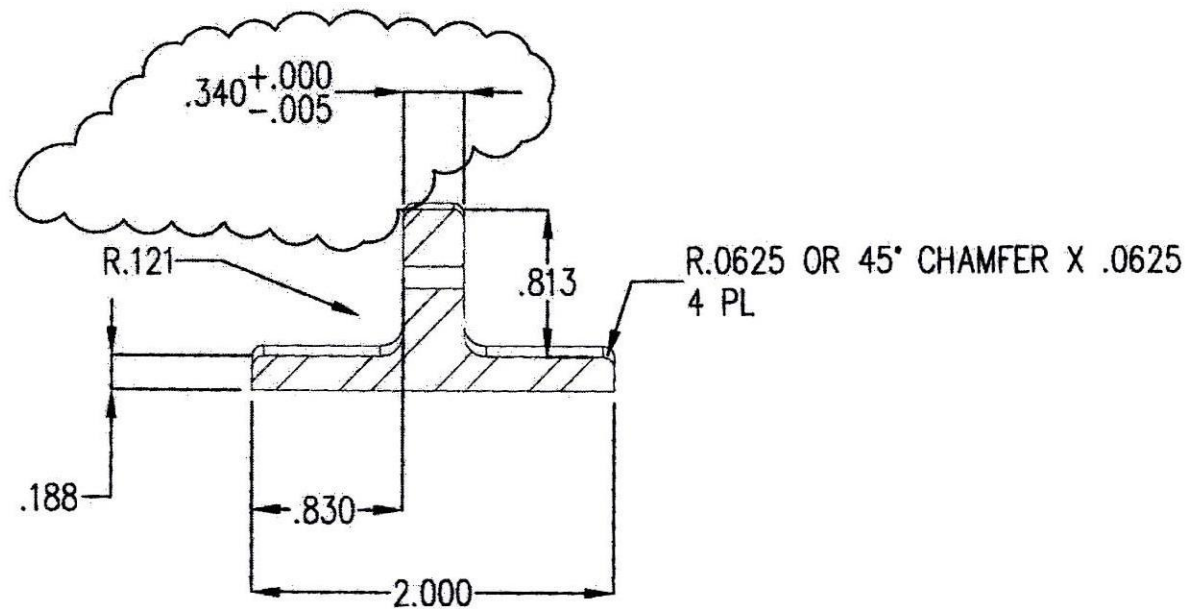
~~SEP 08 2016~~

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150883
SEA 10-09-08

SHEET 1, ZONE B1 IS:

11	R	647.3917	2			DOUBLER		
F/N	TC	PART NUMBER	.3903	.3902	.3901	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY					

DOCUMENTS EFFECTED:	☐ PATTERN ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☒ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO
---------------------	--	---	--



SECTION AT-AT

SHEET 11, ZONE C1 IS:

INDUSTRIES, INC.

SHEET 1 OF 2

EFFECT ON DWG
☐ INC. ☒ UNINC.

EFF.	NEXT ORDER
------	------------

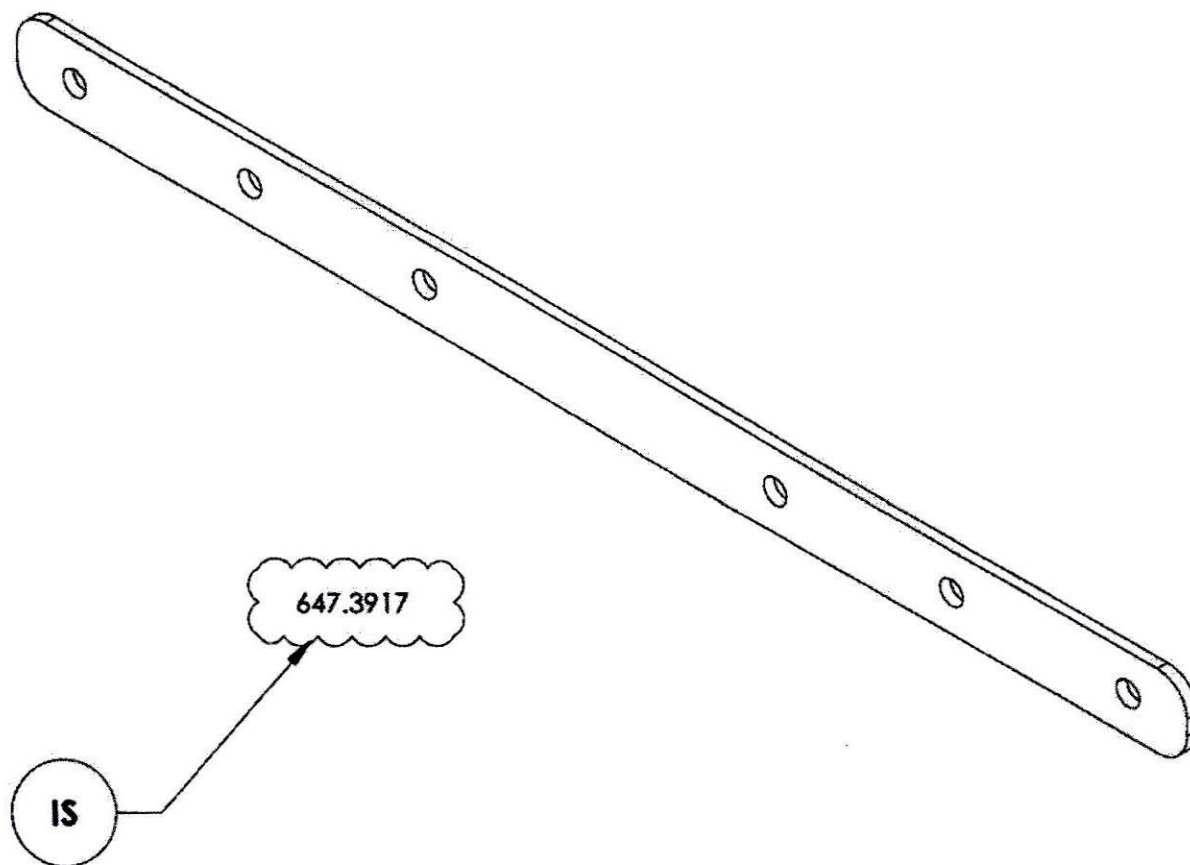
ECR: D-14-04

Technical drawing of a shaft with the following dimensions and features:

- Overall length: 4.483
- Top diameter: .480
- Bottom diameter: .362 $\begin{smallmatrix} +.002 \\ -.000 \end{smallmatrix}$
- Step diameter: .560
- Step diameter tolerance: $\begin{smallmatrix} +.002 \\ -.000 \end{smallmatrix}$
- Bottom diameter tolerance: $\begin{smallmatrix} +.002 \\ -.000 \end{smallmatrix}$
- Bottom diameter: .356 MIN (indicated in a circle)
- Bottom diameter: .362 (indicated in a circle)
- Bottom diameter: .506 (indicated in a circle)
- Bottom diameter: .910 (indicated in a circle)
- Note: .625 TYP (indicated in a cloud shape)

Technical drawing of a mechanical part with dimensions and tolerances. The drawing includes a circular feature labeled "IS" with a leader line pointing to a clouded area labeled "R.0625 TYP". A vertical dimension line on the right indicates a total height of 8.618. The part has several horizontal features with dimensions and tolerances: .910, .533, .362^{+0.002}/_{-.000}, .356 MIN, and .560. A triangular feature is labeled with a circled "6".

11	R	647.3917	2			DOUBLER		1		8	
F/N	TC	PART NUMBER	3903	3902	3901	DESCRIPTION		MATERIAL		SPECIFICATION	
DOCUMENTS EFFECTED:						CHANGE CATEGORY		DER REVIEW REQUIRED			
☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM						☐ MAJOR ☒ MINOR		☐ YES ☒ NO			

SHEET 12, ZONE B5 IS:

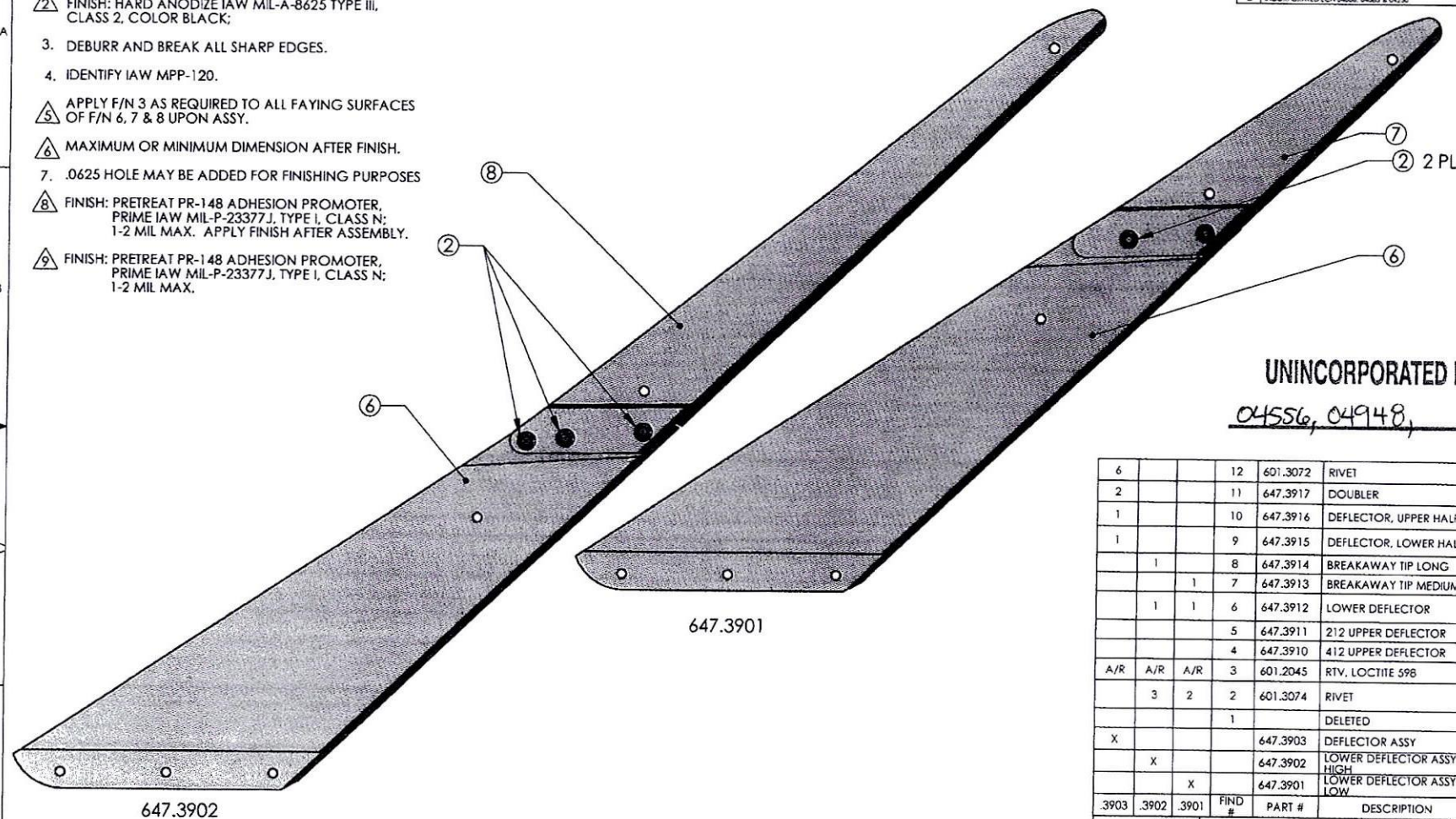
1 2 3 4 5 6 7 8

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NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE RELEASE: P81		
N/C	INITIAL RELEASE	09/10/09	P. BRAVO
A	INCORPORATED ECN 02864, 03339 & 03593	07/24/12	P. BRAVO
B	INCORPORATED ECN 04025	08/02/12	P. BRAVO
C	INCORPORATED ECN 04038, 04085 & 04250	11/18/12	P. BRAVO



UNINCORPORATED ECN(s)

04556, 04948,

6			12	601.3072	RIVET	CR3213-6-9	
2			11	647.3917	DOUBLER		
1			10	647.3916	DEFLECTOR, UPPER HALF	△	△
1			9	647.3915	DEFLECTOR, LOWER HALF	△	△
	1		8	647.3914	BREAKAWAY TIP LONG	△	△△
		1	7	647.3913	BREAKAWAY TIP MEDIUM	△	△△
	1	1	6	647.3912	LOWER DEFLECTOR	△	△△
			5	647.3911	212 UPPER DEFLECTOR	△	△△
			4	647.3910	412 UPPER DEFLECTOR	△	△△
A/R	A/R	A/R	3	601.2045	RTV, LOCTITE 598		△
	3	2	2	601.3074	RIVET	MS20470AD 6-12	
			1		DELETED		
X				647.3903	DEFLECTOR ASSY		△
	X			647.3902	LOWER DEFLECTOR ASSY HIGH		
		X		647.3901	LOWER DEFLECTOR ASSY LOW		
.3903	.3902	.3901	FIND #	PART #	DESCRIPTION	MAT'L	SPEC
QTY				PARTS LIST			
NEXT ASSY (S)				ORIGINAL DATE			
647.3800				DRAWN BY			
				CHECKER			
				DRAWING APPROVAL			
				CONTRACT NO.			
				UNLESS OTHERWISE SPECIFIED			
				DIMENSIONS ARE IN INCHES			
				TOLERANCES ARE:			
				2 PLACE DECIMALS ± .01			
				3 PLACE DECIMALS ± .005			
				ANGLES ± .5°			
				APICAL INDUSTRIES			
				2608 TEMPLE HEIGHTS DR.			
				OCEANSIDE, CA. 92056-3512 (760)724-5300			
				DEFLECTORS			
				REV. NO. 647.3900			
				SCALE NONE			
				SHEET 1 OF 12			

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.125 X 45.0° TYP

SECTION B-B

Ø.177 THRU 3PL

.266 X 17.9°

.045

.603

R.915

2.110±.002

4.220±.002

DETAIL A

R.279

R3.406

15.896

15.304

15.046

B

B

Ø.189

6.446

40.2°

.312

0

18.502

18.127

35.8°

10.702

8.599

6.253

1.700

.777

0

.700

.340^{+.000}
-.002

.346 MAX

DETAIL C

.035 X 45.0° TYP

.375

15.896

647.3911

ORIGINAL DATE
10/24/10
DRAWN BY
D.SCHUR
CHECKED BY
D.BARKER
DRAWING APPROVAL
J. BRAY
02/15/20
CONTRACT NO.

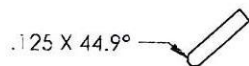
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

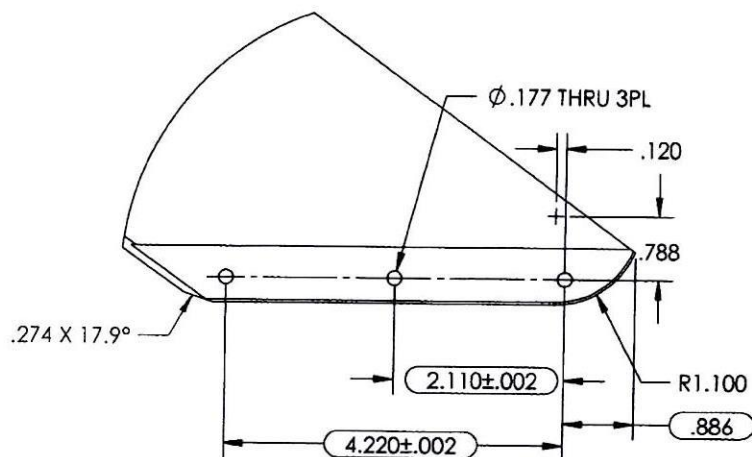
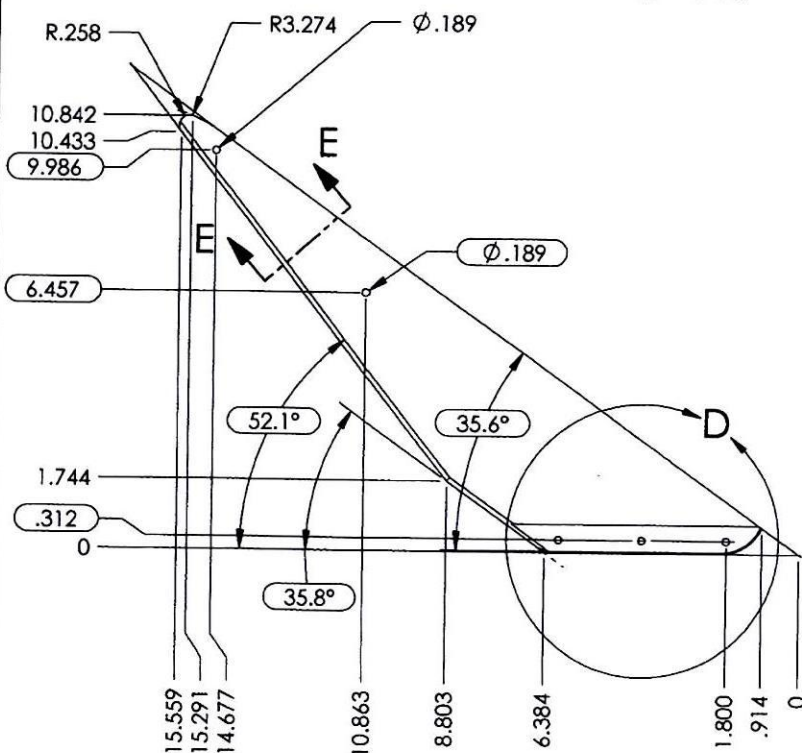
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ± .01
3 PLACE DECIMALS ± .005
ANGLES ± .5°

REV	C	DWG. NO.	647.3900
SIZE	B	CAGE CODE	07M26
SCALE		NONE	
SHEET		2 OF 12	

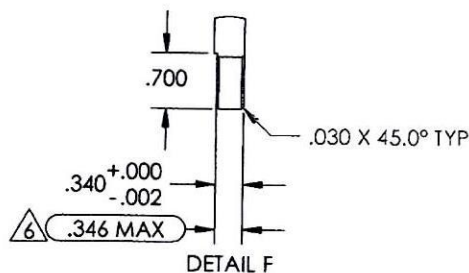
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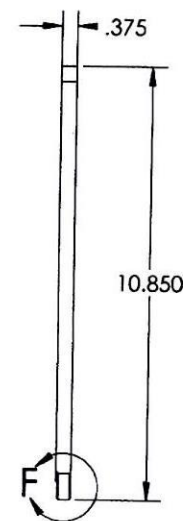
SECTION E-E



DETAIL D



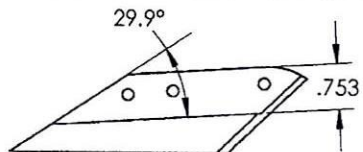
DETAIL F



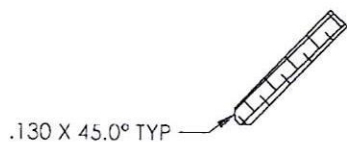
647.3910

ORIGINAL DATE: 08-10-09		APICAL INDUSTRIES	
DRAWN BY: D. BAKER		2608 TEMPLE HEIGHTS DR.	
DRAWING APPROVAL: P. BRAYO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.:		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.		REV: C	
TOLERANCES ARE:		SCALE: NONE	
2 PLACE DECIMALS ± .01		SHEET: 3 OF 12	
3 PLACE DECIMALS ± .005			
ANGLES ± .5°			

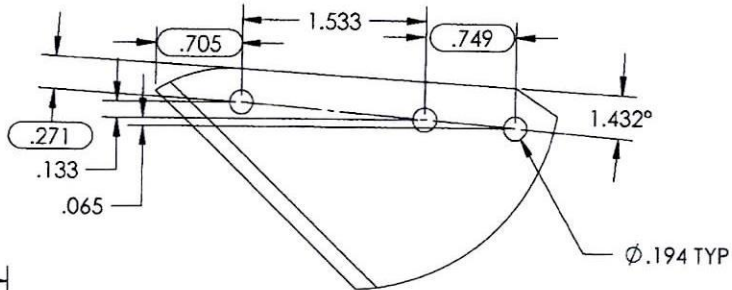
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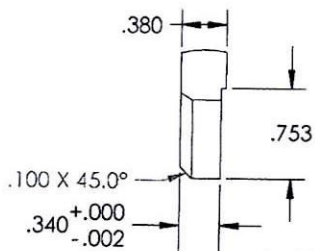
SECTION L-L



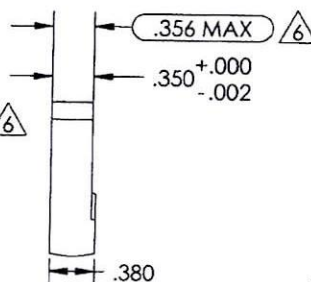
SECTION M-M



DETAIL H



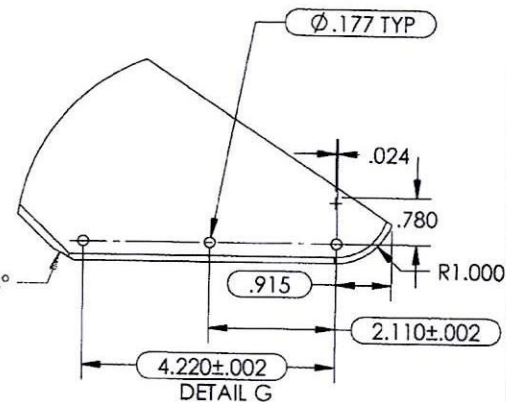
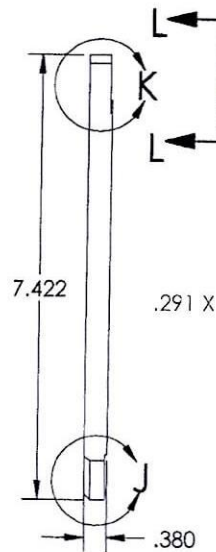
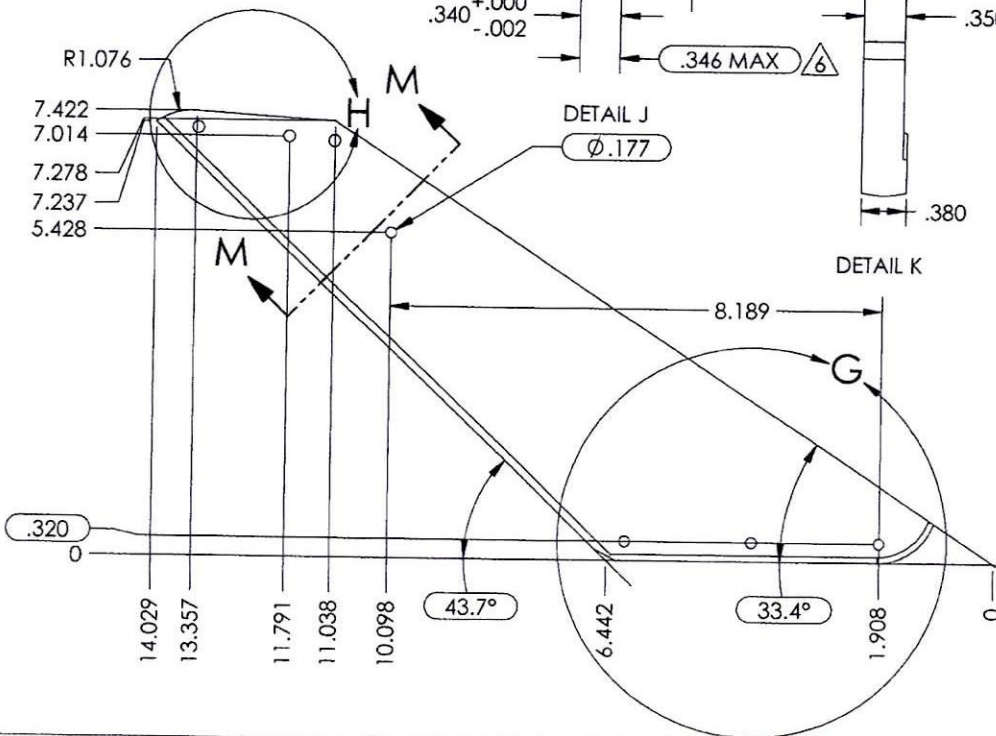
DETAIL J



DETAIL K



647.3912

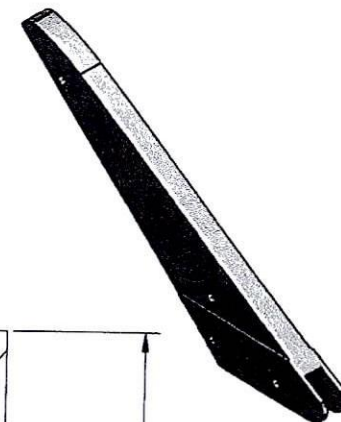
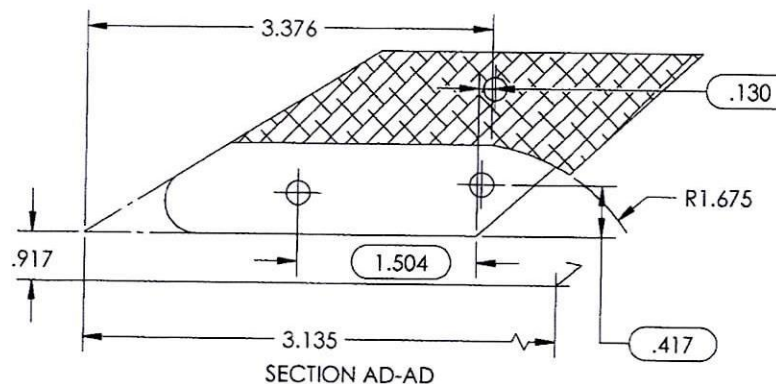


ORIGINAL DATE 04-05-09		APICAL INDUSTRIES	
DRAWN BY	CHECKER	2608 TEMPLE HEIGHTS DR.	
DISCUP	CLARK	OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL		DEFLECTORS	
P. BRAVO		SIZE C A34 CODE B	
CONTRACT No.		DWG. NO. 647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES .8°		SCALE NONE	
		SHEET 4 OF 12	

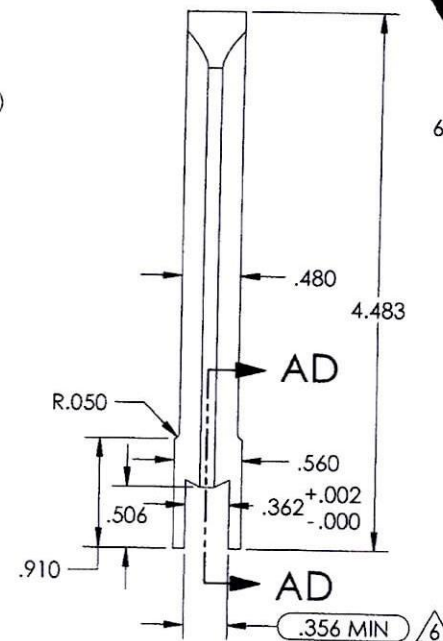
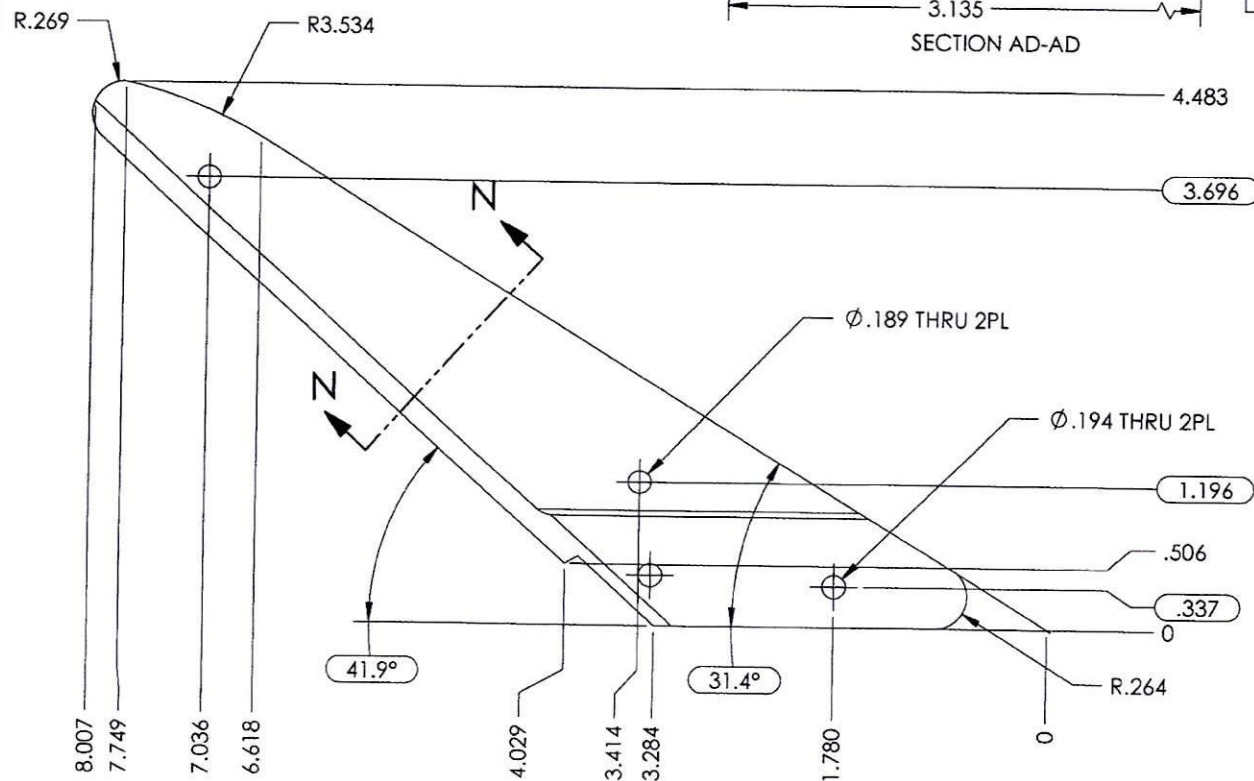
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.180 X 45.0° TYP

SECTION N-N

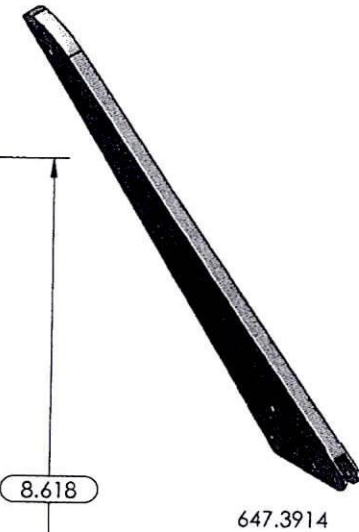
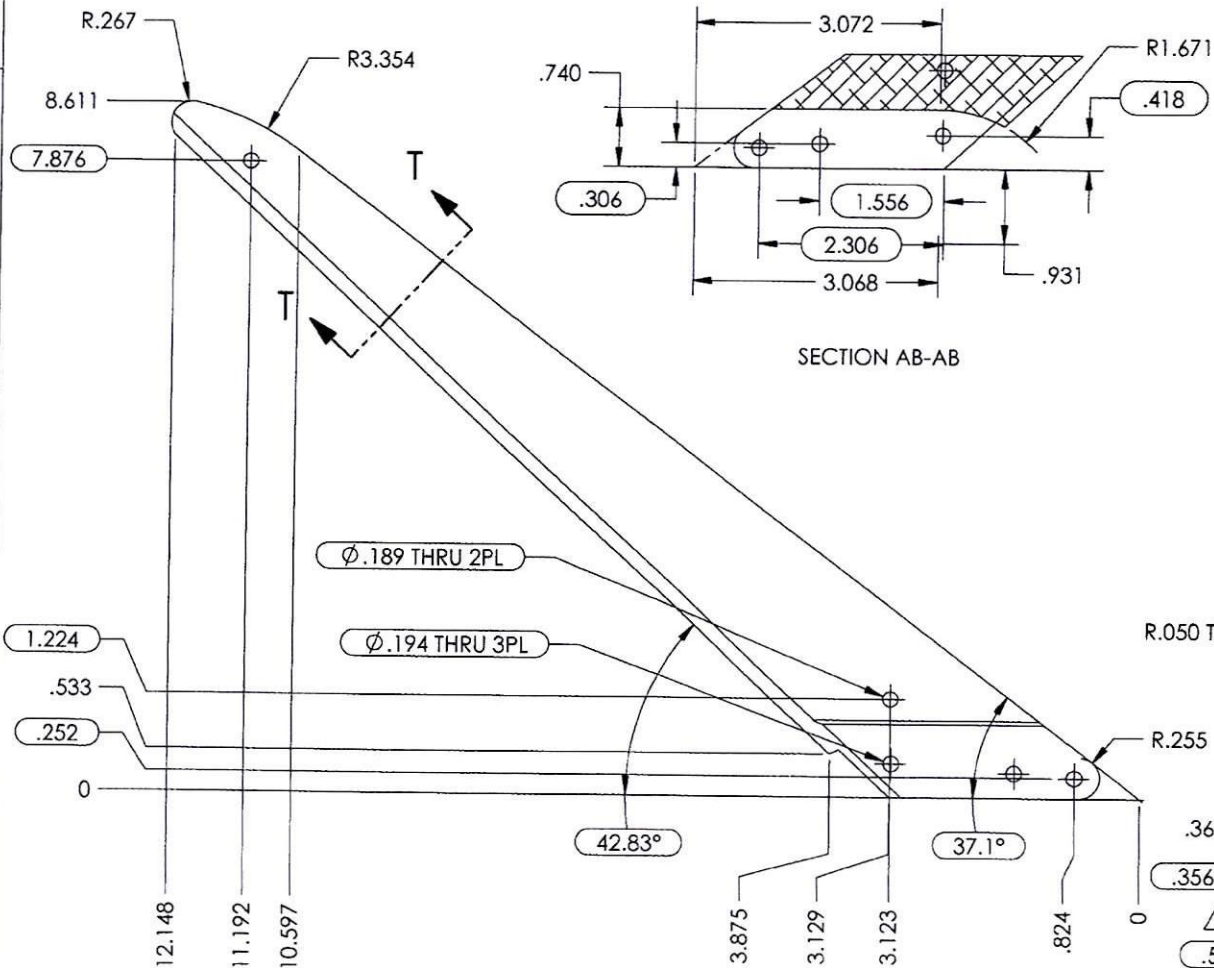
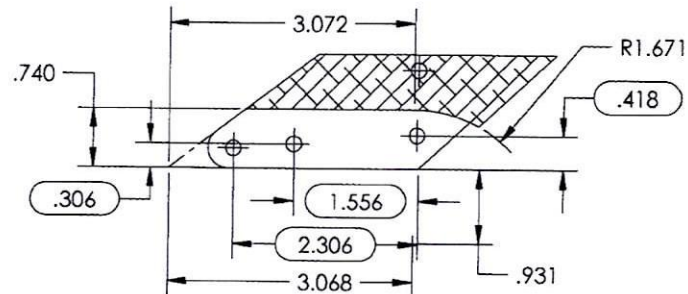
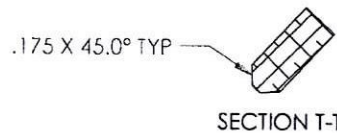


647.3913



ORIGINAL DATE UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.1°		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO DATE		DEFLECTORS	
CONTRACT NO.		SHEET 5 OF 12	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.1°		SCALE NONE	
DRAWING APPROVAL P. BRAVO DATE		SHEET 5 OF 12	

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ORIGINAL DATE 04-01-1981 08-10-04		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY D. SCHULTZ	CHECKED D. BARNER	DEFLECTORS	
DRAWING APPROVAL P. BRALVO 06-10-02 CONTRACT NO.		SCALE NONE	SHEET 6 OF 12
SIZE B	CAGE CODE 07M16	DWG. NO. 647.3900	REV C

1 2 3 4 5 6 7 8

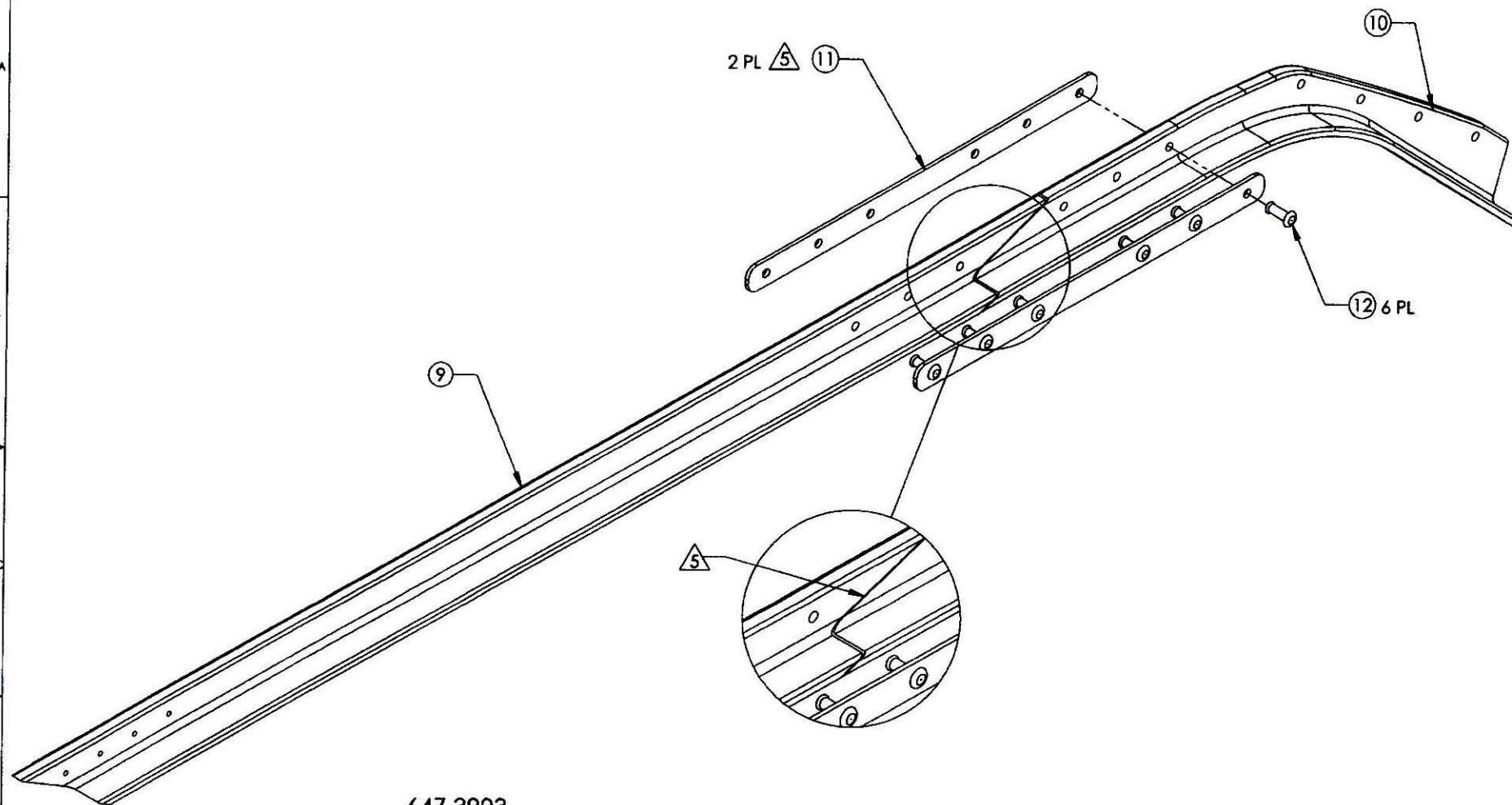
A

B

C

D

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ORIGINAL DATE MAY-24-1978		BY J. SCHUB		CHECKED J. SCHUB	
DRAWING APPROVAL P. H. H. V. O. JUL-20-80		CONTRACT NO.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	CAGE CODE 07M26	DWG. NO. 647.3900	REV. C
SCALE NONE				SHEET 7 OF 12	

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Dimensions and Tolerances:

- Overall Length: $42.760^{+.010}_{-.000}$
- Overall Width: $6.480^{+.010}_{-.000}$
- Internal Length: 9.000
- Vertical Dimensions (from bottom): 0, 1.732, 33.205, 37.040, 42.040, 42.171, 42.784, 4.389, 5.054, 6.480
- Horizontal Dimensions (from right): 0, .171, .271, .646, 1.000, 2.699

DEFLECTORS

ORIGINAL DATE		APICAL INDUSTRIES	
DRAWN BY		CHECKED BY	
DESIGNED BY		APPROVED BY	
DATE		SCALE	
CONTRACT NO.		REV.	
UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES	
TOLERANCES ARE:		FRACTIONS	
3 PLACE DECIMALS ±.01		FRACTIONS	
3 PLACE DECIMALS ±.005		FRACTIONS	
ANGLES		FRACTIONS	

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

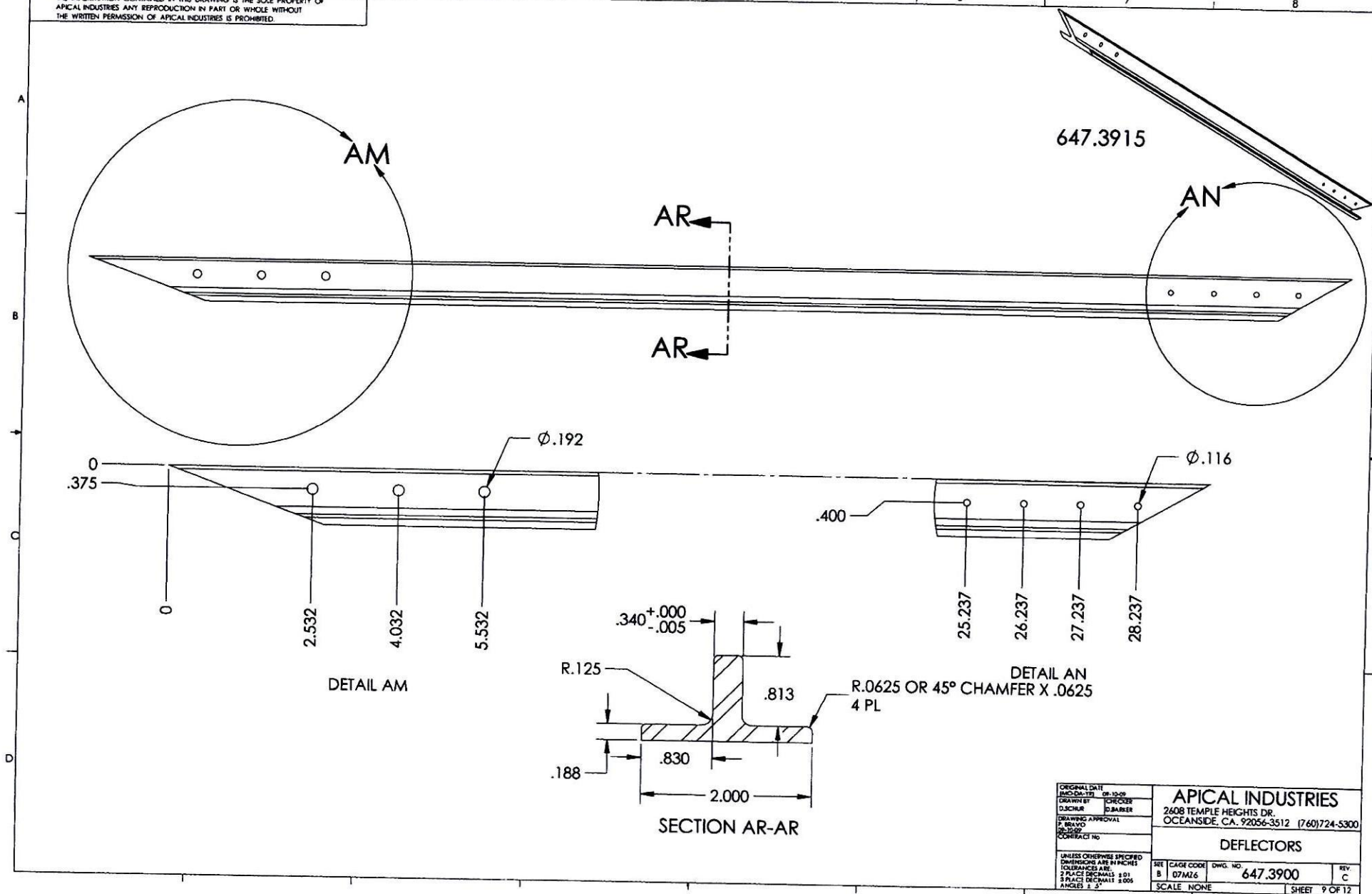
NET CAGE COOR. DWS NO. 647.3900

SCALE NONE

1 SHEET 8 OF 12

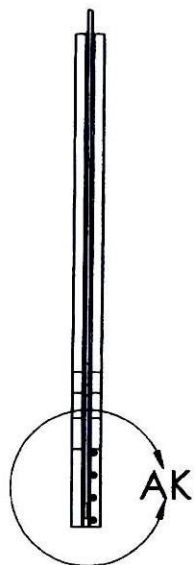
ORIGINAL DATE 10/24/79 09-10-79 DRAWN BY T. GREGG D. SCHAF DRAWING APPROVAL M. BEVCO 10-24-79 CONTRACT NO.	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300								
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 12 FINISHES ARE: 1 2 PLACE EXTERNALS 2005 2 2 PLACE EXTERNALS 2005 3 ANGLE 1.5"	DEFLECTORS <table border="1"> <tr> <td>SEE</td> <td>CAGE CODE</td> <td>DWG NO.</td> <td>REV. C</td> </tr> <tr> <td>B</td> <td>07M16</td> <td>647.3900</td> <td></td> </tr> </table> SCALE NONE	SEE	CAGE CODE	DWG NO.	REV. C	B	07M16	647.3900	
SEE	CAGE CODE	DWG NO.	REV. C						
B	07M16	647.3900							
	SHEET 8 OF 12								

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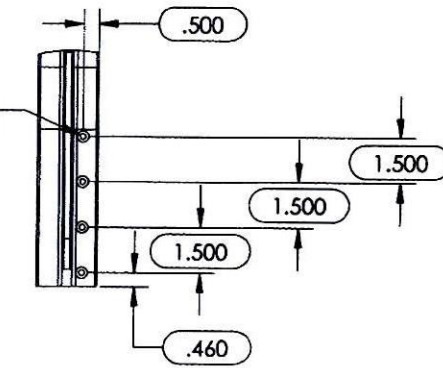


ORIGINAL DATE JANUARY 1978 OR 1979		APICAL INDUSTRIES	
DRAWN BY D. SCHUR		2608 TEMPLE HEIGHTS DR.	
CHECKED BY D. BARKER		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BERRY		DEFLECTORS	
CONTRACT NO.		647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		REV. C	SHEET 9 OF 12

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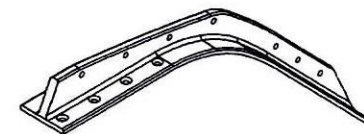
4X $\phi .196 \pm .010$ THRU ALL
✓ $\phi .385 \pm .020 \times 100^\circ \pm 1.000^\circ$



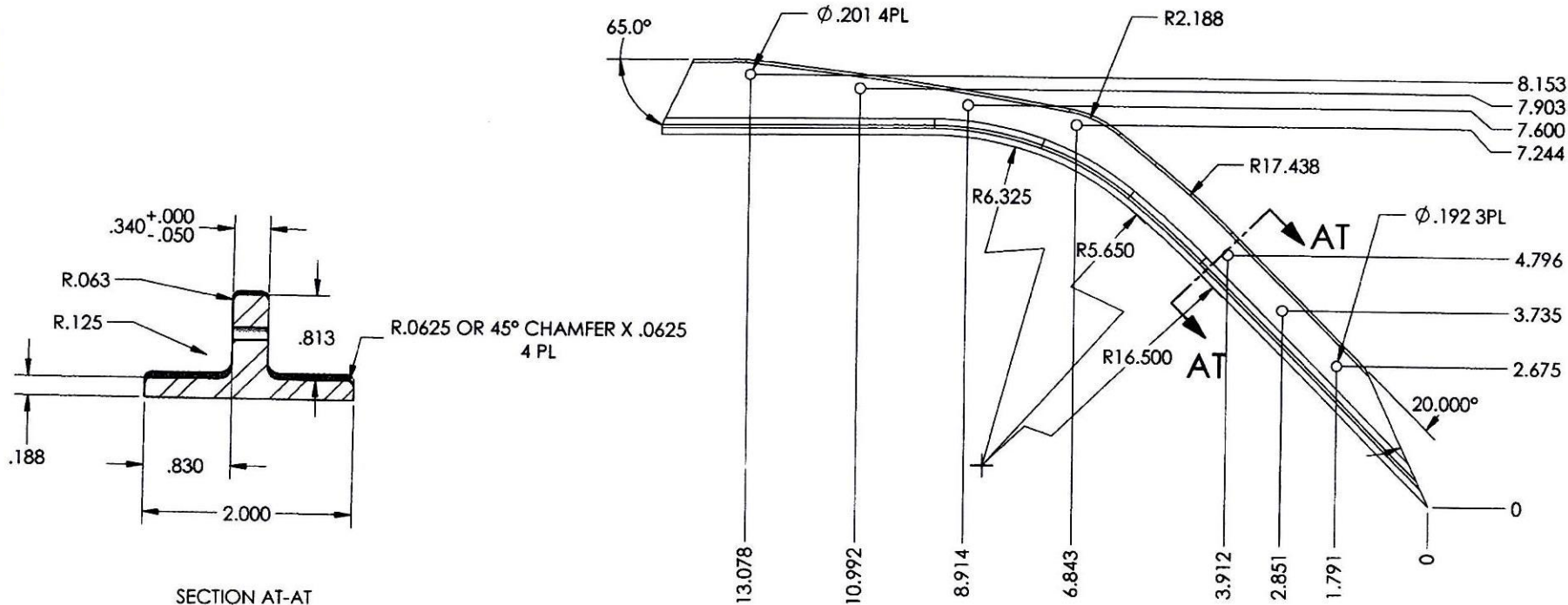
647.3915

ORIGINAL DATE (MM-DD-YY) 09-10-08		APICAL INDUSTRIES	
DRAWN BY EJCHAP		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY D. BARNES		DEFLECTORS	
DRAWING APPROVAL P. BRAVO		DWG. NO. 647.3900	
DATE 09-10-08		REV. C	
CONTACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$		SHEET 10 OF 12	

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647.3916



ORIGINAL DATE JUN-04-1981 BY: 10-09		APICAL INDUSTRIES	
DRAWN BY: CHICKEN		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: D. MARKER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		DEFLECTORS	
CONTRACT NO.		SCALE: NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B 07M26	REV. C

SHEET 11 OF 12

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R.250
4 PL

.625

0

.500

2.000

3.500

6.500

8.000

9.500

10.000

647.9317

.090

Ø.196
6 PL

ORIGINAL DATE
(MM-DD-YY) 08-10-08
DESIGN BY JCB/CSH
D.J. CHURCH JCB/CSH
DRAWING APPROVAL
P. BRADY
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.004
ANGLES ±.5°

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

REV.	C
SCALE	NONE
SHEET	12 OF 12